

## EFFICACY STUDY REVIEW

by Kevin J. Sweeney, Entomologist - IB

*Kevin J. Sweeney*  
11/24/03

To: Susan Stanton

Date: November 24, 2003

EPA Reg. No. or File Symbol: 2724-UOT

Product Name: RF9908 Spot-on

Registrant: Wellmark International, Inc

PM: Linda Arrington, Acting PM 10

Action: 160?

Dec No. 328888      DP #: D291571

Chemical: permethrin 45% and 3% s-methoprene      Type: pet spot-on for dogs

App rate: 1, 2, and 3 ml/dog depending on size of animal. Apply every 30 days.

Pests: fleas, ticks and mosquitoes

Site: dogs

OPPTS Guideline: 810.3300

Label Review and Review of Submitted Studies

The data are being submitted to support product claims against the labeled pests.

Submitted Studies:

MRID 46006002 Efficacy of RF-9908 Spot-on by J. Cunningham, AgSearch Consultants

The protocol was standard except that the data were collected via testing both active ingredients as part of the product at the same time. My concern is that even though methoprene and permethrin have differing modes of action, how can the effects of methoprene be assessed

when permethrin is acting at the same time to kill the exposed fleas?

The results indicate that the product provided 16 days of control against fleas and 30 days against ticks. The effect of methoprene on flea larval emergence can not be assessed due to the possibility that permethrin toxicity affected the outcome of the test results. Flea eggs collected from treated animals did not hatch.

**MRID 46006002 Efficacy of permethrin and pyriproxifen product for control of fleas, ticks, and mosquitoes on dogs. This is a published study that did not test the subject product and did not include raw data.**

The study is considered supplemental. Submit or cite mosquito data. This study claims that fleas are controlled for three weeks. Submit data showing fleas are killed for four weeks or revise the label claims accordingly.

**Entomologist's Recommendations:**

1. The submitted data support adult flea claims for up to three weeks. Submit data to show four weeks control or modify the labeling to reflect the results of the data.
2. The ovicidal/larval flea claims are acceptable for up to 30 days. Delete the longer claims or submit/cite data with methoprene.
3. The mosquito data are not acceptable. Submit or cite data. Limit the exposure period to one hour in the test. If you wish to retain West Nile virus claims, test *Culex* mosquitoes also.
4. Test repellency or cite data if you wish to retain repellency claims.

#2 K. Sweeney misunderstood claims for 90/120 days.  
These claims reflect product packaged with  
3 applicators or 4 applicators, provided 3 mos. or  
4 mos. of control.

*S.L. Stanton*  
12/4/23